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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,860	08/28/2003	Byeong-Hoon Lee	P24068	6351

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GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

BROWN, DREW J

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,860

Applicant(s)

LEE, BYEONG-HOON

Examiner

Drew J. Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 8-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/4/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION***Specification***

1. The disclosure is objected to because of the following informalities: On line 6 of page 4, "an" is not needed. On lines 8 and 13 of page 4, the sentence should read "for a vehicle having" instead of "for vehicle, having." On line 6 of page 5, a comma is not needed after "member." On line 1 of page 10, "f" should be "of". The specification is also replete with numbers that are not in the figures (see, for example, elements 250, 320, 330, and 340 on page 10, 341 and 341a on page 12, and 183' on page 14). The specification is further replete with numerals that incorrectly represent the elements in the drawings (see, for example, lower steering shaft 12, universal joint 13, upper column member 15, and lower column member 14). Finally, Fig. 8a should read as Fig. 8 when referring to page 14.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Higashino et al. (U.S. Pat. No. 5,143,402). Higashino et al. discloses a tilt steering apparatus for a vehicle that has a lower steering shaft with the lower end mounted with a steering gear, an upper steering shaft with the top end mounted with a steering wheel, and a universal joint (Figures 1 and 2) that joints a top end of the lower steering shaft with a low end of the upper steering shaft. A lower

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column member 2 is fixed to the vehicle body to support the lower steering shaft to be pivotable, and an upper column member supports the upper steering shaft to be pivotable. A tilt lock mechanism tilt-locks the upper column member to the lower column member, wherein the top end side of the upper column member is "closed." The tilt lock mechanism comprises of a fixed gear 9 attached to the lower column member via the upper column member, a movable gear 12 attached to the top end side of the upper column member in such a manner to be pivotable 26, slots 31 perforated on both sides of the upper column member, and a wedge member 30 disposed at the slots to tooth-lock the movable gear to the fixed gear by pressing the movable gear. There is also a hook piece 37 mounted on the wedge member to encompass a lower end side of the movable gear.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashino et al. in view of Hirashara et al. (U.S. Pat. No. 4,949,990). Higashino et al. discloses the claimed tilt steering apparatus as discussed above but does not disclose that a rear end side of the upper column member on which the tilt lock mechanism is mounted is further closed. Hirashara et al., however, does disclose that the rear end side of the upper column member is closed 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to enclose the tilt lock mechanism at the rear end side of the upper column

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member as taught by Hirashara et al. in order to protect the occupant's legs from injury and also protect the tilt lock mechanism from being damaged. The enclosure also improves the aesthetics of the steering column.

Allowable Subject Matter

6. Claims 3-5 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamaguchi et al. (U.S. Pat. No. 5,144,855), Yamaguchi (U.S. Pat. No. 5,005,862), Matsumoto et al. (U.S. Pat. No. 4,938,093), and Snell et al. (U.S. Pat. No. 5,823,062) disclose similar tilt steering mechanisms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 7 a.m. to 4 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Drew J Brown
Examiner
Art Unit 3616

DJB

 7/28/05
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600